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What is claimed is:

1. A network station comprising:

a network device having a collision counter that tracks collisions and an inter packet gap unit that is programmable; and

a dynamic IPG determiner that obtains collision counts from the collision counter, dynamically generates an IPG value that is a function of the collision counts, and programs the inter packet gap unit with the dynamically generated IPG value.

2. The station of claim 1, wherein the dynamic IPG determiner periodically generates the IPG value after a steady state time period.

3. The station of claim 2, wherein the steady state time period is about 1 second.

4. The station of claim 1, wherein the dynamic IPG determiner generates the IPG value by testing a plurality of IPG values and evaluating a number of collisions for each of the IPG values.

5. The station of claim 4, wherein the range of IPG values is from about 96 bit times to about 272 bit times.

6. The station of claim 4, further comprising a storage unit that maintains collision counts associated with tested IPG values.

7. The station of claim 6, wherein the dynamic IPG determiner and the storage unit are components of a device driver.

8. The station of claim 1, wherein the dynamically generated IPG value is a function of an IPG range, a step value, a convergence time, and a stable state time.

9. The station of claim 1, wherein the network device is operable to transmit and receive data at about 100 Mbps in half duplex mode.

10.   A network system comprising:

a plurality of networked stations wherein one or more of the stations dynamically generate IPG values according to tracked collision counts and programmable parameters; and

5   a network medium that connects the one or more stations.

11.   The system of claim 10, wherein the programmable parameters include an IPG range and a step value.

10   12.   The system of claim 10, further comprising a network coordinator that tracks network collisions and network throughput and dynamically modifies the programmable parameters of the one or more stations that dynamically generate IPG values to modify the network throughput to achieve a desired throughput.

15   13.   A method of dynamically generating an IPG value for a network device comprising:

setting one or more programmable parameters, wherein the programmable parameters include a range of IPG values;

dynamically determining an IPG value from the range of IPG values according to
20   tracked collisions;

programming the network device with the determined IPG value.

14.   The method of claim 13, wherein dynamically determining an IPG value from the range of IPG values comprises:

25   testing one or more IPG values of the range of IPG values;

obtaining respective collision counts for the one or more tested IPG values;

selecting the determined IPG value as being the value of the one or more tested IPG values that yielded a lowest collision count.

30   15.   The method of claim 14, wherein testing each of the one or more IPG values comprises:

programming an IPG current value to a network device;

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obtaining a current collision count over a selected period of time;

setting an IPG modified value to the IPG current value on the current collision count being less than that associated with the IPG modified value; and

incrementing the IPG current value by a step value.

16. The method of claim 15, wherein the IPG modified value is the determined IPG value.

17. The method of claim 13, wherein the programmable parameters further include a step value, a convergence time, and a stable state time.

18. The method of claim 15, wherein the current collision count is obtained from the network device.

19. The method of claim 15, wherein the IPG current value is initially 96 bit times.

20. The method of claim 15, wherein the step value is 1 bit time.

21. The method of claim 13, wherein the method is performed after a stable state period.

22. The method of claim 21, wherein the stable state period is about 60 seconds.